

REMARKS

The Office Action mailed on March 9, 2005 has been given careful consideration by applicant. Reconsideration of the application is respectfully requested in view of the amendments and comments herein.

The Office Action

The Specification is objected to for minor informalities.

Claim 13 is objected to for minor informalities.

Claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by Nakamura (US 5,309,228).

Claims 2, 3 and 4 are rejected under 35 U.S.C. §103(a) as being unpatentable over Nakamura in view of Shafarenko (IEEE Transactions on Image Processing, Vol. 7, No. 9, September 1998).

Claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over Nakamura in view of Shafarenko and further in view of Bradski (US 6,647,131).

Claims 6, 7 and 8 are rejected under 35 U.S.C. §103(a) as being unpatentable over Nakamura in view of Shafarenko and further in view of Herley (Patent Application No. US 2002/0146173).

Claims 9, 10, 11 and 12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Nakamura in view of Herley.

Claim 13 is rejected under 35 U.S.C. §103(a) as being unpatentable over Shafarenko in view of Nakamura and further in view of Herley.

Claims 14 and 15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shafarenko in view of Nakamura.

Claim 16 is rejected under 35 U.S.C. §103(a) as being unpatentable over Shafarenko in view of Nakamura and further in view of Bradski.

Claims 17-22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shafarenko in view of Nakamura and further in view of Herley.

Claim 23 is rejected under 35 U.S.C. §103(a) as being unpatentable over Nakamura in view of Herley.

Claim 24 is rejected under 35 U.S.C. §103(a) as being unpatentable over Herley in view of Shafarenko.

Objection to the Specification

The specification is objected to for minor informalities. This objection should be withdrawn for at least the following reason. Paragraph [0005] has been amended according to the Examiner's suggestion.

Objection to Claim 13

Claim 13 is objected to for minor informalities. This objection should be withdrawn for at least the following reason. Claim 13 has been amended according to the Examiner's suggestion.

The Anticipation Rejection

The Examiner has rejected claim 1 under 35 U.S.C. §102(b) as being anticipated by Nakamura (US 5,309,228). This rejection should be withdrawn for at least the following reasons. Nakamura does not teach or suggest each and every element as set forth in the subject claim.

In particular, applicants' claimed invention is directed toward detecting and segmenting sweeps from non-sweeps in a graphics image. As known, a sweep is an area of uniformly changing colors and a non-sweep is an area of uniform colors. (See Application, p. 2, § [0005]). More particularly, independent claim 1 recites detecting sweep segment information from one or more color channel histograms of the graphics image and segmenting the graphics image into sweep and non-sweep areas using the sweep segment information.

In the subject Office Action (dated March 9, 2005), it is asserted Nakamura teaches each and every element of claim 1. The Examiner contends that column 3, lines 27-44, and column 12, lines 22-45, of Nakamura disclose detecting areas of uniformly changing colors (sweeps) as recited in the subject claim. Applicants' representative respectfully disagrees. Rather, column 3, lines 27-44, relates to discriminating between portions of an image that have the same color tone. Nakamura discloses that the flesh color tone of a person's face (featured portion of an image) is similar to that of the flesh color portions of the ground or a tree (remaining portions of the image), and that discriminating between the person's face and the ground or tree (portions of the image with the same color tone) using only hue values is nearly impossible. (See col. 3, lines 27-32 and 53-55). Nakamura alleges that by also utilizing saturation values, the person's face can be more easily discriminated from the other

portions of the image with the same color tone (ground and trees) since the face and the other portions have different saturation values in most cases. (See col. 3, lines 32-40 and 55-57). Nakamura purports that the saturation differences along with the hues values enables the face portion to be extracted from portions of the image where face, ground and tree data are mixed. (See col. 3, lines 57-60). Column 12, lines 22-45, merely provides steps for face extraction (See column 12, l.8) where hue values and saturation values are obtained and clustered.

The Examiner contends that column 12, lines 22-55, discloses segmenting the graphics image into sweep and non-sweep areas using the sweep segment information. However, this section of Nakamura does not contemplate such claimed aspects. Instead, this section provides that picture elements are clustered in accordance with the hue and saturation clustering, a prospective region that may include the face portion is extracted, the face portion is estimated from the extracted region, and three-color photometric data for the estimated face portion is output.

In view of the above, it is readily apparent the Nakamura does not teach or suggest detecting and segmenting uniformly changing colors portions in an image from uniform color portions in an image with sweep segment information, but instead discloses a technique to extract a face portion of an image from other portions that have the same color tone. Accordingly, this rejection should be withdrawn.

The Obviousness Rejections

The Examiner has rejected claims 2-4 are rejected under 35 U.S.C. §103(a) as being unpatentable over Nakamura in view of Shafarenko (IEEE Transactions on Image Processing, Vol. 7, No. 9, September 1998). This rejection should be withdrawn for at least the following reasons. Claims 2-4 depend from independent claim 1, and Shafarenko fails to make up for the aforementioned deficiencies of Nakamura. Instead, Shafarenko teaches a technique that uses a watershed algorithm to segment 2D or 3D color histograms of an image. (See Abstract). Moreover, there is no motivation, suggestion or desirability to combine or modify the references as suggested by the Examiner. Rather, Shafarenko expressly teaches away from such combination; Shafarenko discloses a technique where segmentation **must** take place in a "uniform color space" (See Abstract), which is contrary to the claimed invention in which non-uniform (uniformly changing color) portions in an image are detected and segmented from uniform color portions. In view of the above, it is respectfully requested that this

rejection should be withdrawn.

The Examiner has rejected claim 5 under 35 U.S.C. §103(a) as being unpatentable over Nakamura in view of Shafarenko and further in view of Bradski (US 6,647,131). For at least the following reasons, this rejection should be withdrawn. Claim 5 depends from claim 3, and Bradski does not make up for the deficiencies of Nakamura and Shafarenko described above. Bradski instead teaches detecting motion by generating a motion region image of an object, obtaining associated normal gradients, using the gradients to remove erroneous data, and using remaining gradients to identify motion. Therefore, this rejection should be withdrawn.

The Examiner has rejected claims 6-8 under 35 U.S.C. §103(a) as being unpatentable over Nakamura in view of Shafarenko and further in view of Herley (Patent Application No. US 2002/0146173). The rejection of these claims should be withdrawn for at least the following reasons. Claims 6, 7 and 8 depend from claims 3, 6 and 7, respectively, and Herley fails to make up for the above-noted deficiencies of Nakamura and Shafarenko. Herley simply teaches a technique for automatically detecting object boundaries in a digital image in which one or more boundaries obtained from analyzing an edge map are assigned to respective objects based on a set of rules. Accordingly, this rejection should be withdrawn.

The Examiner has rejected claims 9-12 under 35 U.S.C. §103(a) as being unpatentable over Nakamura in view of Herley. Claims 9, 10, 11 and 12 depend from claims 1, 9, 10 and 11, respectively, and are believed to be in condition for allowance for at least the reasons discussed above. Therefore, it is respectfully requested that the rejection of the subject claims be withdrawn.

The Examiner has rejected claim 13 under 35 U.S.C. §103(a) as being unpatentable over Shafarenko in view of Nakamura and further in view of Herley. Claim 13 depends from claim 9 and, thus, is believed to be in condition for allowance for at least the reasons discussed above. Accordingly, withdrawal of this rejection is respectfully requested.

The Examiner has rejected claims 14-15 under 35 U.S.C. §103(a) as being unpatentable over Shafarenko in view of Nakamura. Independent claim 14 recites a method for detecting and segmenting sweeps in a graphics image that includes processing two-dimensional histograms to detect sweep segment information and segmenting the input graphics image into sweep and non-sweep areas using the sweep segment information. As discussed supra in connection with claims 2-4 (which depend from independent claim 1), neither Shafarenko nor Nakamura teach or suggest all aspects of the subject claims, there is not motivation, suggestion or desirability to combine the teachings of these references (Shafarenko teaches away from such combination), and even if the references could be combined, the result would not render the claimed invention. Accordingly, this rejection should be withdrawn.

The Examiner has rejected claim 16 under 35 U.S.C. §103(a) as being unpatentable over Shafarenko in view of Nakamura and further in view of Bradski. This rejection should be withdrawn for at least the following reasons. Claim 16 depends from claim 14, and Bradski fails to make up for the deficiencies of Nakamura and Shafarenko as described supra. Therefore, this rejection should be withdrawn.

The Examiner has rejected claims 17-22 under 35 U.S.C. §103(a) as being unpatentable over Shafarenko in view of Nakamura and further in view of Herley. For at least the following reasons, this rejection should be withdrawn. Claims 17-22 depend from claim 14, and Herley does not make up for the aforementioned deficiencies of Shafarenko and Nakamura as discussed previously. Accordingly, withdrawal of this rejection is respectfully requested.

The Examiner has rejected claim 23 under 35 U.S.C. §103(a) as being unpatentable over Nakamura in view of Herley. The rejection of this claim should be withdrawn for at least the following reasons. The combination of Nakamura and Herley does not teach or suggest all aspects of the subject claim. In particular, independent claim 23 recites a method for detecting and segmenting sweeps in a graphics image, including combining pixel information (associated with detected curves in one or more planes generated from projecting an image a color space) for each color to determine if pixels of a particular color are part of a sweep. As discussed supra, the combination of Nakamura and Herley does not teach or suggest detecting and segmenting uniformly

changing color portions (sweeps) in an image, let alone determining if associated pixels of a graphic image of a particular color are part of a sweep as recited in the subject claim. In view of the above, it is respectfully requested that the rejection of claim 23 should be withdrawn.

The Examiner has rejected claim 24 under 35 U.S.C. §103(a) as being unpatentable over Herley in view of Shafarenko. This rejection should be withdrawn for at least the following reasons. Claim 24 depends from claim 23, and Shafarenko does not make up for the deficiencies of Nakamura and Herley. Therefore, this rejection should be withdrawn.

Amendments to Claim 22

Claim 22 was amendment to correct a minor informality.

Newly added Claims

Claims 25 and 26 have been added to further emphasize various aspects of the originally filed claims and do not require additional search. No new matter has been added. Entry of these claims is kindly requested.

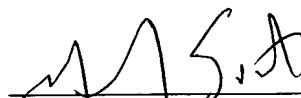
CONCLUSION

For the reasons detailed above, it is respectfully submitted that all claims (1-24) remaining in the application are in condition for allowance.

Respectfully submitted,

FAY, SHARPE, FAGAN,
MINNICH & McKEE, LLP

3/1/05
Date

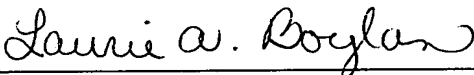


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